Switching | DGS-3120 Series

# DGS-3120 Series

## xStack L2 Managed Stackable Gigabit Switches

dlink green  XSTACK  IPv6 READY

### Product Highlights:

**Flexible Choices**
- 24, 48 10/100/1000Mbps and 16 SFP
- 4 or 8 combo Gigabit copper/SFP uplinks for connections either in cabinets or metropolitan areas.
- Selectable software images provide sophisticated feature set for your environment.
- 802.3af and 802.3at Power Over Ethernet support[1]

**High Bandwidth Physical/Virtual Stacking**
- 2 dedicated stacking ports per switch
- Up to 40 Gbps Full-Duplex Stacking Bandwidth
- Up to 6 units (288 Gigabit ports) per stack
- Linear or Fault Tolerant Ring Stacking Topology
- Virtual Stacking of up to 32 units
- Embedded D-Link SIM for integration of all the xStack switches

**Reliability**
- Redundant Power Supply (RPS) support
- 802.1D/802.1w/802.1s Spanning Tree
- Loopback Detection (LBD)
- Ethernet Ring Protection Switching (ERPS)

**Security**
- Multi-Layer Access Control List (ACL)
- IP-MAC-Port Binding (IMPB)
- D-Link Safeguard Engine
- DHCP Server Screening
- BPDU Attack Protection
- ARP Spoofing Prevention

**Triple Play**
- IGMP/MLD Snooping
- IGMP Snooping Multicast (ISM) VLAN
- Port/Flow- based bandwidth control
- Granular Bandwidth Control Down to 64Kbps

**IPv6 Features**
- IPv6 Neighbor Discovery (ND)
- IPv6 Management
- IPv4/v6 Dual Stack
- IPv6 Ready Logo Phase 2

[1] For DGS-3120-24PC/48PC models only.

The DGS-3120 xStack Series are enhanced L2 access stackable switches designed to connect end-users in a secure business network. These switches support physical stacking, multicast and enhanced security, making them an ideal Gigabit access layer solution. The DGS-3120-24TC/48TC provides 20 or 44 10/100/1000 Mbps Gigabit Ethernet ports and 4 combo 1000BASE-T/SFP Gigabit Ethernet ports. The DGS-3120-24PC/48PC provides 24 or 48 10/100/1000 Mbps PoE Gigabit Ethernet ports and 4 combo 1000BASE-T/SFP Gigabit Ethernet ports. The DGS-3120-24SC provides 16 SFP Gigabit Ethernet ports and 8 combo 1000BASE-T/SFP Gigabit ports. Each 10/100/1000 Mbps port of DGS-3120-24PC/48PC supports 802.3af and 802.3at Power over Ethernet standard. The default power budget is 370 Watts and can be expanded to 740 Watts with the DPS-700 RPS. The switches are also equipped with an SD Card slot, allowing the user to boot images and upload configuration files directly from an SD Card. Furthermore, syslog files can also be conveniently saved to a card.

### Standard and Enhanced Images

The DGS-3120 Series is embedded with two different software images - Standard Image (SI) and Enhanced Image (EI). The Standard Image provides sophisticated features for businesses. It includes advanced Quality of Service (QoS), traffic shaping, L2 multicasting and robust security features. The Enhanced Image supports ERPS, Double VLAN (Q-in-Q), Ethernet OAM, Static Route, IMPB, sFlow, IPv6 features which are suitable for the next generation IPv6 networks or triple play applications in Metro Ethernet.

### Enhanced Network Reliability

The DGS-3120 Series targets businesses and customers who require a high level of network security and maximum uptime. All the models in DGS-3120 Series support an external redundant power supply so that continued operation can be assured. They also include other features, such as 802.1D Spanning Tree (STP), 802.1w Rapid Spanning Tree (RSTP) and 802.1s Multiple Spanning Tree (MSTP), Loopback Detection (LBD), and Broadcast Storm Control, that enhance network resilience. The G.8032 Ethernet Ring Protection Switching (ERPS) function minimises the recovery time to 50 ms. For load sharing and redundancy backup in switch cascading/server attachment configuration, the DGS-3120 Series provides dynamic 802.3ad Link Aggregation Port Trunking.

### Comprehensive Security

The DGS-3120 Series provides users with the latest security features such as Multi-layer and Packet Content Access Control Lists (ACL), Storm Control, and IP-MAC-Port Binding (IMPB) with DHCP Snooping. The IP-MAC-Port Binding feature allows administrators to bind a source IP address with an associated MAC and also define the port number to enhance user access control. With the DHCP Snooping feature, the switch automatically learns IP/MAC pairs by snooping DHCP packets and saving them to the IMPB white list. In addition, the D-Link Safeguard Engine™ identifies and prioritises "CPU interested" packets to prevent malicious traffic from interrupting normal network flows, and to protect switch operation.

### Identity Driven Network Policies

The DGS-3120 Series supports authentication mechanisms such as 802.1X, Web-based Access Control (WAC), and MAC-based Access Control (MAC) for strict access control and easy deployment. After authentication, individual policies such as VLAN membership, QoS policies, and ACL rules can be assigned to each host. In addition, the switch also supports Microsoft® NAP (Network Access Protection). NAP is a policy enforcement technology that allows customers to protect network assets from unhealthy computers by enforcing compliance with network health policies.

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# DGS-3120 Series
## xStack L2 Managed Stackable Gigabit Switches

D-LinkAssist
Rapid Response Support

If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly-trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

**D-Link Assist Gold - for comprehensive 24-hour support**
D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

**D-Link Assist Silver - for prompt same-day assistance**
D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

**D-Link Assist Bronze - for guaranteed response on the next business day**
D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

### Traffic Management for Triple Play
The DGS-3120 Series implements a rich set of multilayer QoS/CoS features to ensure that critical network services like VoIP, video conference, IPTV and IP Surveillance are served with high priority. The Traffic Shaping features guarantee bandwidth of these services when the network is busy. With L2 Multicast support, the DGS-3120 Series shows its ability to handle growing IPTV applications. Host-based IGMP/MLD Snooping allows multiple multicast subscribers per physical interface and ISM VLAN sends multicast streams in a multicast VLAN to save bandwidth and to provide better security to the backbone network. The ISM VLAN profiles allow system administrators to bind/replace the pre-defined multicast registration information to subscriber ports quickly and easily.

### Proactive, Effective Network Management
To uphold business customers' Service Level Agreements (SLA), service providers must reduce the Mean Time to Repair (MTTR) and increase service availability. Ethernet OAM features address these challenges and enable service providers to offer carrier-grade services. The DGS-3120 Series supports industry-standard OAM tools, including IEEE 802.3ah, IEEE802.1ag, and ITU-T Y.1731. Connectivity Fault Management (CFM) provides tools to monitor and troubleshoot end-to-end Ethernet networks, allowing service providers to check connectivity, isolate network issues, and identify customers affected by network issues.

### IPv6 Technology
The DGS-3120 Series is fully compliant with the future IPv6 networks. It supports remote IPv6 manageability from telnet, HTTP, or SNMP. To create secure IPv6 networks, the DGS-3120 Series uses IPv6 ACL, DHCPv6 Snooping and Neighbour Discovery (ND) Snooping functions to protect the network from illegal IPv6 clients. The DGS-3120 Series has been certified with IPv6 Ready Logo Phase 2 from the IPv6 forum, a worldwide IPv6 advocacy consortium. The IPv6 Ready Logo Program provides conformance and interoperability of IPv6 products.

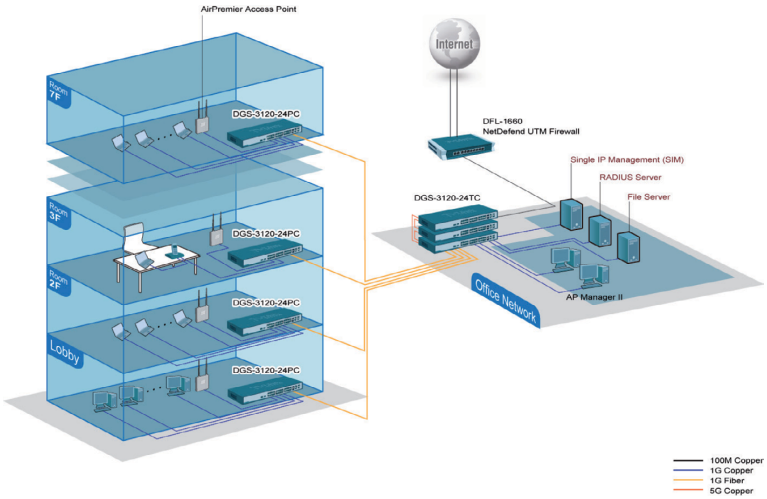
### Manageability
D-Link's Single IP Management (SIM) simplifies and speeds up management tasks, allowing multiple switches to be configured from any workstation running a web browser through one unique IP address. This virtual stack is managed as a single object, having all units maintained by one IP address. The DGS-3120 Series also supports standard-based management protocols such as SNMP, RMON, Telnet, Console, Web-based GUI and SSH/SSL security authentication.

### D-Link Green Technology
D-Link is striving to take the lead in developing innovative and power-saving technology that does not sacrifice functionality. The DGS-3120 Series implements the D-Link Green Technology, which includes a power saving mode, smart fan, reduced heat dissipation, and cable length detection. The power saving feature automatically powers down ports that have no link or link partner. The Smart Fan feature allows for the built-in fans to automatically turn on at a certain temperature, providing continuous, reliable and eco-friendly operation of the switch.

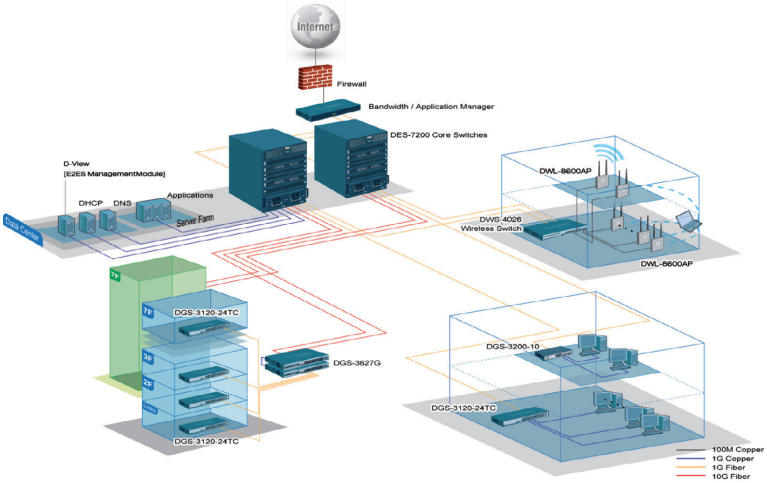
# DGS-3120 Series

## xStack L2 Managed Stackable Gigabit Switches

### Deploying the DGS-3120 Series in a small to medium sized network




### Deploying the DGS-3120 Series in an enterprise network

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# DGS-3120 Series

## xStack L2 Managed Stackable Gigabit Switches

## Technical Specifications

| | | DGS-3120-24TC | DGS-3120-48TC | DGS-3120-24PC | DGS-3120-48PC | DGS-3120-24SC |
|---|---|---|---|---|---|---|
| General | Interface | 20 10/100/1000BASE-T 4 Combo 10/100/1000BASE-T/SFP | 44 10/100/1000BASE-T 4 Combo 10/100/1000BASE-T/SFP | 20 10/100/1000BASE-T 4 Combo 10/100/1000BASE-T/SFP | 44 10/100/1000BASE-T 4 Combo 10/100/1000BASE-T/SFP | 16 SFP 8 Combo 10/100/1000Base-T/SFP |
| | Optional Redundant Power Supply | DPS-200 | DPS-500/DPS-500DC | DPS-700 | DPS-700 | DPS-200 |
| | Console Port | RJ-45 | | | | |
| | Stacking Port | 2 | | | | |
| | SD Card Slot | 1 | | | | |
| Performance | Switching Capacity | 88 Gbps | 136 Gbps | 88 Gbps | 136 Gps | 88 Gps |
| | 64-Byte Packet Forwarding Rate | 65.48 Mpps | 101.19 Mpps | 65.48 Mpps | 101.19 Mbps | 65.48 Mbps |
| | Packet Buffer Memory | 2 MB | | | | |
| | Flash Memory | 32 MB | | | | |
| PoE | PoE Standard | | | 802.3af and 802.3at | 802.3af and 802.3at | |
| | PoE Power Budget | | | 370 watts 740 watts (with DPS-700 RPS) | 370 watts 740 watts (with DPS-700 RPS) | |
| MTBF (Hours) | | TBD | TBD | TBD | TBD | TBD |
| Acoustics | | Max: 49.8 db; Min: 37.7 db | Max: 44.6 db; Min: 36.4 db | TBD | TBD | TBD |
| Heat Dissipation | | 138.105 BTU/h | 228.811 BTU/h | 1646.007 BTU/h (with 370W PoE load) 3188.691 BTU/h (with 740W PoE load) | 1761.265 BTU/h (with 370 W PoE load) 3310.428 BTU/h (with 740W PoE load) | 116.281 BTU/h |
| Power Input | | 100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply | | | | |
| Max Power Consumption | | 40.5 Watts | 67.1 Watts | 482.7 Watts (with 370W PoE load): 935.1 Watts (with 740W PoE load) | 516.5 Watts (with 370W PoE load) 970.8 Watts (with 740W PoE load) | 34.1 Watts |
| Dimensions (W x D x H) | | 440 x 210 x 44 mm | 440 x 310 x 44 mm | 440 x 310 x 44 mm | 440 x 380 x 44mm | 440 x 210 x 44mm |
| Weight | | 2559 g | TBD | TBD | TBD | TBD |
| Ventilation | | Smart Fan[2] ( > 40˚ C: High Speed; < 35˚ C: Low Speed) | | | | |
| Operating Temperature | | 0 to 50 ˚C | | | | |
| Storage Temperature | | -40 to 70 ˚C | | | | |
| Operating Humidity | | 10% to 90% RH | | | | |
| Storage Humidity | | 5% to 90% RH | | | | |
| Emission (EMI) | | FCC Class A, CE Class A, VCCI Class A, IC, C-Tick | | | | |
| Safety | | CB, cUL, LVD | | | | |
| Certification | | IPv6 Ready Logo Phase 2 | | | | |

[2] By default, the fan speed is low. When over 40 ˚C, the fan switches to high speed and remains high until the temperature is down to 35 ˚C.



Fragen zu dem Produkt? Kein Problem - wir helfen Ihnen per eMail (info@diskontcomputer.com) gerne weiter!
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# DGS-3120 Series

## xStack L2 Managed Stackable Gigabit Switches

## Software Features

### Standard Image (SI) Features

**Stackability**
- Physical Stacking
  - Up to 40G Stacking Bandwidth
  - Up to 6 units per Stack
- Virtual Stacking
  - D-Link Single IP Management (SIM)
  - Up to 32 units per Virtual Stack

**L2 Features**
- MAC Address Table: 16K
- Flow Control
  - 802.3x Flow Control
  - HOL Blocking Prevention
- Jumbo Frame up to 13K Bytes
- Spanning Tree Protocols
  - 802.1D STP
  - 802.1w RSTP
  - 802.1s MSTP
  - BPDU Filtering
  - Root Restriction
- Loopback Detection
- 802.3ad Link Aggregation
  - Max. 32 groups per device/ 8 Gigabit ports per group
- Port Mirroring
  - One-to-One
  - Many-to-One
  - Flow-based
  - RSPAN Mirroring

**L2 Multicasting**
- IGMP Snooping
  - IGMP v1/v2/v3 Snooping
  - Supports 1024 IGMP groups
  - Port/Host-based IGMP Snooping Fast Leave

**Limited IP Multicast**
- Up to 24 IGMP filtering profiles, 32 ranges per profile
- MLD Snooping
  - MLD v1/v2 Snooping
  - Support 1024 MLD Groups
  - Host-based MLD Snooping Fast Leave

**VLAN**
- VLAN Group
  - Max. 4K VLAN Groups
- GVRP
  - Max. 255 Dynamic VLAN Groups
- 802.1Q Tagged VLAN
- Port-based VLAN
- 802.1v Protocol VLAN
- Voice VLAN
- MAC-based VLAN
- ISM VLANAsymmetric VLAN
- Private VLAN
- VLAN Trunking

**QoS (Quality of Service)**
- 802.1p
- 8 queues per port
- Queue Handling
  - Strict Priority
  - Weighted Round Robin (WRR)
  - Strict + WRR
- CoS based on
  - Switch Port
  - VLAN ID
  - 802.1p Priority Queues
  - MAC Address
  - IPv4 Address
  - DSCP
  - Protocol Type
  - TCP/UDP Port
  - User-Defined Packet Content
  - IPv6 Address
  - IPv6 Traffic Class
  - IPv6 Flow Label
- Supports following actions for flows Remark
  - 802.1p Priority Tag
  - Remark TOS/DSCP Tag
  - Bandwidth Control
- Bandwidth Control
  - Port-based (Ingress/Egress,Min. Granularity 64 Kbps)
  - Flow-based (Ingress/Egress,Min. Granularity 64 Kbps)

**Access Control List (ACL)**
- Supports up to 1.5K Ingress access rules
- ACL based on
  - 802.1p Priority
  - VLAN ID
  - MAC Address
  - Ether Type
  - IPv4 Address
  - DSCP
  - Protocol Type
  - TCP/UDP Port Number
  - User-Defined Packet Content
  - IPv6 Address
  - IPv6 Flow Label
  - IPv6 Traffic Class
- Time-based ACL
- CPU Interface Filtering

**Security**
- SSH v2
- SSL v1/v2/v3
- Port Security
  - Up to 64 MAC addresses per port/VLAN
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- D-Link Safeguard Engine™
- NetBIOS/Net
- BEUI Filtering
- DHCP Server Screening
- ARP Spoofing Prevention
- BPDU Attack Protection

**AAA**
- 802.1X:
  - Port-based Access Control
  - Host-based Access Control
  - Identity-driven Policy (VLAN, ACL or QoS Assignment
  - Authentication Database Failover
- Web-based Access Control (WAC):
  - Port-based Access Control
  - Host-based Access Control
  - Identity-driven Policy (VLAN, ACL or QoS Assignment
  - Authentication Database Failover
- MAC-based Access Control (MAC):
  - Port-based Access Control
  - Host-based Access Control
  - Identity-driven Policy (VLAN, ACL or QoS) Assignment
  - Authentication Database Failover
- Japan Web-based Access Control (Host-based JWAC)[3]
- Guest VLAN
- Microsoft® NAP
  - Support 802.1X NAP
  - Support DHCP NAP
- RADIUS Accounting
- RADIUS and TACACS authentication for switch access
- 4 Level User Account

**D-Link Green Features**
- Compliant with RoHS
- Power Saving by Link Status
- Power Saving by Cable Length
- Time-based PoE[4]

**Operation, Administration & Management (OAM)**
- Cable Diagnostics

**Management**
- Web-based GUI (Supports IPv4)
- Command Line Interface (CLI)
- Telnet Server(Supports IPv4)
- Telnet Client(Supports IPv4)
- TFTP Client(Supports IPv4)ZModem
- SNMP v1/v2c/v3
- SNMP Traps
- System Log (Supports IPv4 Log Server)
- RMON v1:
  - Supports 1,2,3,9 groups
- RMON v2:
  - Supports Probe
- Config groupLLDP
- BootP/DHCP Client
- DHCP Auto-Configuration
- DHCP RelayDHCP Relay Option 12
- DHCP Relay Option 82
- Flash File System
- Multiple Images
- Multiple ConCPU Monitoring
- Debug Command
- SNTP

[3] Supported from firmware R2.0 SI and above.
[4] Supported in DGS-3120-24PC and DGS-3120-48PC only.



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## xStack L2 Managed Stackable Gigabit Switches

## Software Features

- Password Recovery
- Password Encryption
- Trusted Host
- Microsoft NLB (Network Load Balancing) Support

MIB
- RFC 1213 MIB II
- RFC 4188 Bridge MIB
- RFC 1157, 2571-2576 SNMP MIB
- RFC 1907 SNMPv2 MIB
- RFC 1757, 2819 RMON MIB
- RFC 2021 RMONv2 MIB
- RFC 1398, 1643, 1650, 2358, 2665 Ether-like MIB
- RFC 2674 802.1p MIB
- RFC 2233, 2863 IF MIB
- RFC 2618 RADIUS Authentication Client MIB
- RFC 2620 RADIUS Accounting Client MIB
- RFC 2925 PING & TRACEROUTE MIB
- RFC 2674, 4363 802.1p MIB
- RFC 1215 MIB Traps Convention

RFC Standard Compliance
- RFC 768 UDP
- RFC 791 IP
- RFC 792, 2463, 4443 ICMP
- RFC 793 TCPRFC 826 ARP
- RFC 3513, 4291, IPv6 Addressing Architecture
- RFC 2893, 4213 IPv4/IPv6 dual stack function
- RFC 2463, 4443 ICMPv6
- RFC 2462, 4862 IPv6 Stateless Address Auto Configuration
- RFC 2464 IPv6 Ethernet and definition
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2460 IPv6
- RFC 2461, 4861 Neighbor Discovery for IPv6
- RFC 783 TFTPRFC 854 Telnet
- RFC 951, 1542 BootP
- RFC 2068 HTTP
- RFC 1492 TACACS
- RFC 2866 RADIUS Accounting
- RFC 2474, 3260 DiffServ
- RFC 1321, 2284, 2865, 3580, 3748 Extensible Authentication Protocol (EAP)
- RFC 2571, 2572, 2573, 2574, SNMP
- IPv6 Ready Logo Phase 2

### Enhanced Image (EI) Features

L2 Features
- Ethernet Ring Protection Switching (ERPS)

VLAN
- Double VLAN (Q-in-Q)
  - Port-based Q-in-Q

L3 Features
- Max. 16 IP Interfaces
- ARP Proxy[5]
- IPv6 Neighbour Discovery (ND)

L3 Routing
- Static Route
  - 512 static routing entries for IPv4/IPv6

Access Control List (ACL)
- Supports up to 512 Egress access rules

Security
- IP-MAC-Port Binding
  - ARP Packet Inspection
  - IP Packet Inspection
  - DHCP Snooping
  - IPv6 ND Snooping
  - Support up to 510 Address Binding Entries per Device

AAA
- Compound Authentication

Operation, Administration & Management (OAM)
- 802.3ah Ethernet Link OAM
- 802.3ah D-Link Extension: D-link Unidirectional Link Detection (DULD)[5]
- 802.1ag Connectivity Fault Management (CFM)
- ITU-T Y.1731[5]

Management
- SNMP v1/v2c/v3
  - SNMP over IPv6
- sFlow
- ICMPv6
- Web-based GUI (Supports IPv6)
- Telnet Server(Supports IPv6)[5]
- Telnet Client(Supports IPv6)[5]
- TFTP Client(Supports IPv6)[5]

For further information: www.dlink.eu

[5] Supported from firmware R2.0 SI and above.

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